

## What Is Being Done To Present the Other Side?

The Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) is a nonprofit scientific and educational organization started in 1976 by scientists (including several Nobel laureates), members of the academic community, and science writers. Members of CSICOP, frequently referred to as *skeptics*, advocate the scientific investigation of paranormal claims and the dissemination of factual information to counter those claims. CSICOP's mission includes taking advantage of opportunities to promote critical thinking, science education, and the use of reason to determine the merits of important issues.<sup>47</sup>

The Council for Media Integrity, an educational outreach and advocacy program of CSICOP, was established in 1996. Its objective is to promote the accurate depiction of science by the media. The Council, which includes distinguished international scientists, academics, and members of the media, believes it is necessary to counteract the entertainment industry's portrayal of paranormal phenomena because:

- ♦ television has such a pervasive impact on what people believe;
- ♦ an increasing number of shows are devoted to the paranormal, and they attract large audiences;
- ♦ a number of shows use a documentary style to promote belief in the reality of UFOs, government coverups, and alien abductions;
- ♦ opposing views are seldom heard in shows that advocate belief in the paranormal; and
- ♦ some shows contribute to scientific illiteracy by promoting unproven ideas and beliefs as real, instilling a distrust of scientists<sup>48</sup> and fostering misunderstanding of the methods of scientific inquiry.

To promote media responsibility—particularly within the entertainment industry—and to publicize irresponsibility—the Council established two awards<sup>49</sup>:

- ♦ The “Candle in the Dark Award” is given to television programs that have made a major contribution to advancing the public's understanding of science and scientific principles. The 1997 and 1998 awards went to two PBS programs: *Bill Nye—The Science Guy* and *Scientific American Frontiers*.

<sup>47</sup>CSICOP's official journal *The Skeptical Inquirer* is a vehicle for disseminating and publicizing the results of scientific studies of paranormal claims.

<sup>48</sup>According to one study, scientists are portrayed more negatively than members of any other profession on prime-time entertainment shows. They are more likely to be killed or to kill someone. In fact, the study found that 10 percent of the scientists on fictional TV shows get killed and 5 percent kill someone (Gerbner 1987).

<sup>49</sup>The award titles were inspired by Carl Sagan's book, *The Demon Haunted World: Science as a Candle in the Dark* (Sagan 1996).

- ♦ The “Snuffed Candle Award” is given to television programs that impede public understanding of the methods of scientific inquiry. The 1997 and 1998 winners were Dan Akroyd, for promoting the paranormal on the show *Psi-Factor*, and Art Bell, whose radio talk-show promoted belief in UFOs and alien abductions.

In its efforts to debunk pseudoscience, the Council also urges TV producers to label documentary-type shows depicting the paranormal as either entertainment or fiction, provide the media with the names of expert spokespersons, ask U.S. newspapers to print disclaimers with horoscope columns, and use “media watchdogs” to monitor programs and encourage responsibility on the part of television producers.

Finally, various skeptics groups and renowned skeptic James Randi have long-standing offers of large sums of money to anyone who can prove a paranormal claim. Randi and members of his “2000 Club” are offering more than a million dollars. So far, no one has met the challenge.

## Conclusion

Americans express a high level of interest in science and technology. Despite this interest, they lack confidence in their knowledge of these subjects; in 1999, only 17 percent thought they were well informed about science and technology. Those with more years of formal education and those who have taken more courses in science and mathematics are more likely than others to express a high level of interest in science and technology and to believe that they are well informed about them.

Data on science literacy in the United States indicate that most Americans do not know a lot about science and technology. The percentage of correct responses to a battery of questions designed to assess the level of knowledge about, and understanding of, science terms and concepts has not changed appreciably in the past few years. In addition, approximately three-quarters of Americans do not understand the nature of scientific inquiry. Individuals with more years of formal schooling and who have taken more courses in science and mathematics were more likely than others to provide correct responses to the science literacy questions.

Americans have highly positive attitudes toward science and technology, strongly support the Federal Government's investment in basic research, and have high regard for the science community. However, some individuals harbor reservations, especially about technology and its effect on society. In addition, the use of nuclear energy and the use of dogs and chimpanzees in scientific research do not have widespread support. Also, a sizeable minority of the public questions the value of the space program; however, support has been gaining ground in recent years. Finally, in the past few years, new pockets of concern about genetic engineering have arisen among the well-educated and those most attentive to medical issues.

Americans get most of their information about public policy issues from television news and newspapers. There is widespread consensus—among both scientists and journal-

ists—that important information about science and technology and their value to society is not reaching the public. In addition, the media have come under criticism, especially by scientists, for sometimes providing a distorted view of science and the scientific process, and thus contributing to scientific illiteracy.

Computers and computer technology represent a relatively new way of acquiring information, including information about science and technology. Computer usage—including access to the Internet and the use of e-mail—has skyrocketed. This phenomenon is thoroughly explored in chapter 9, “Significance of Information Technologies.”

## Selected Bibliography

- The American Institute of Physics. 1997. “Congressman Ehlers on Science Policy.” In *Bulletin of Science Policy News* (November 21).
- Angell, M. 1996. *Science on Trial: The Clash of Medical Evidence and the Law in the Breast Implant Case*. New York: W.W. Norton & Company, Inc.
- Augustine, N. 1998. “What We Don’t Know Does Hurt Us. How Scientific Illiteracy Hobbles Society.” *Science* (March 13).
- Beyerstein, B.L. 1998. “The Sorry State of Scientific Literacy in the Industrialized Democracies.” *The Learning Quarterly* 2, No. 2:5–11.
- Bragg, M. 1998. “Opportunity Knocks!” *Science* (August 21).
- The Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). Information available from <<<http://www.csicop.org>>>.
- Davis, J.A., and T.W. Smith. *General Social Surveys, Cumulative Codebook*. Annual Series. Chicago: University of Chicago, National Opinion Research Center.
- De Robertis, and Delaney. 1993. “A Survey of the Attitudes of University Students to Astrology and Astronomy.” *Journal of the Royal Astronomical Society of Canada* 87, No. 1:34–50.
- Evans, W. 1996. “Science and Reason in Film and Television.” *The Skeptical Inquirer* (January/February).
- Frankel, M.S. 1998. “The Role of Science in Making Good Decisions.” Testimony before the House Committee on Science (June 10).
- Gallup News Service Poll. 1996. (September). Results are based on telephone interviews with 1,000 adults, age 18 and older, conducted September 3–5, 1996. For results based on the total sample of adults, one can say with 95-percent confidence that the margin of sampling error is plus or minus 3 percentage points.
- Gannett Co., Inc. 1996. “1996 Media Effectiveness Study.” Corporate Research.
- Gerbner, G. 1987. “Science on Television: How It Affects Public Conceptions.” *Issues in Science and Technology* (spring):109–15.
- The Harris Poll #41. 1998. “Large Majority of People Believe They Will Go to Heaven; Only One in Fifty Thinks They Will Go to Hell: Many Christians and Non-Christians Believe in Astrology, Ghosts, and Reincarnation.” New York: Louis Harris & Associates, Inc. (August 12). This poll was conducted by telephone within the United States July 17–21, among a nationwide cross-section of 1,011 adults. The results have a statistical precision of plus or minus 3 percentage points.
- Hartz, J., and R. Chappell. 1997. *Worlds Apart: How the Distance Between Science and Journalism Threatens America’s Future*. Nashville, TN: Freedom Forum First Amendment Center.
- Herron, K.G., and H.C. Jenkins-Smith. 1998. *Public Perspectives on Nuclear Security*. Albuquerque, NM: The University of New Mexico Institute for Public Policy (June). Rigorous probability sampling methods were applied, yielding an approximate sampling error of plus or minus 3 percentage points for the scientist and general public samples and approximately plus or minus 4 percentage points for the legislator sample. For the general public, a sample frame of randomly selected and randomly ordered households having one or more telephones was purchased from Survey Sampling, Incorporated, of Fairfield, Connecticut. Probability sampling was extended within each household by interviewing only the member of the household over the age of 18 with the most recent birthday. Up to 10 attempts were made to contact the individual selected for the sample. No substitutions were made. The scientists and legislators in the survey were sent questionnaires by mail. For the scientists in the survey, participants were randomly chosen from among 123,406 scientists and engineers whose names were published in *American Men and Women of Science, 1995–1996*. A sample frame of 7,000 names was purchased from Cahners Direct Marketing Services in New York. The final sample was constructed using a random number generator and was stratified in proportion to the percentage of members classified in each of nine major scientific disciplines specified by the publisher and a tenth category identified by the publisher as “other professional fields.” The legislator sample was systematically selected from the total population of 7,424 state legislators listed in the *State Leadership Directory: Directory 1—Elective Officials 1997*, published by the Council of State Governments, Lexington, Kentucky, and stratified in three ways.
- Hill, R.L. 1997. “Peddling the Paranormal.” *The Sunday Oregonian Forum* (September 21).
- Irwin, H. 1993. “A Study of the Measurement and the Correlates of Paranormal Belief.” *Journal of the American Society for Psychical Research* 79:301–26.
- Kansas City Star and Wichita Eagle. 1999. “Evolution Poll Results” (November 7). Available from <<<http://www.kcstar.com/news/stories/evpoll.htm>>>. Telephone interviews of 604 Kansas residents conducted by Market Research Institute, Inc. The poll has a margin of error of 4 percentage points.
- Kimmel, L. 1997. “Public Attitudes about the Use of Animals in Scientific Research.” Paper presented at a confer-